UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *23 June 2005*.

2a) ☒ This action is **FINAL.** 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-28 and 33-45* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-28 and 33-45* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____.

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Specification

1.   Examiner acknowledges the amendment to the Specification regarding trademarks. Consequently the objection is withdrawn.

Claim Objections

2.   Applicant is advised that should claims 2, 3 be found allowable, claims 15,16 (respectively) will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

3.   Applicant is advised that should claims 5, 6, 7 be found allowable, claims 17, 18, 19 (respectively) will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

4.   Applicant is advised that should claim 4 be found allowable, claim 20 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two

claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

5.   Applicant is advised that should claim 14 be found allowable, claim 37 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 29 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 29 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: the inference as stated in

the preamble in the claim. The claim sets forth a method of inferring the popularity,

without any guess, rendering the claim indefinite.

Claim Rejections - 35 USC § 101

6.   Examiner acknowledges the amendment to Claims 1-28 regarding the rejection

under § 101. Consequently the rejection is withdrawn.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

7.   Claims 1-8, 10-29, 33, 37-45 rejected under 35 U.S.C. 102(b) as being

anticipated by U.S. Patent No. 5,835,087 to Herz et al., hereafter "Herz".

Regarding claim 1 Herz teaches a computer-implemented popularity predicting

process for determining the popularity of a text-based object. See Figures 2, 5, 11, 12,

16 and the corresponding portions of Herz's disclosure for this teaching. In particular,

Herz teaches "A popularity predicting process for determining the popularity of a text-

based object, comprising:

       –   a query analysis [Column 4, line 49 – Column 5, line 6] process [Figure

       12, item 1201] for analyzing a query to determine a plurality of links to Internet

       objects [target data objects] relating to said query;

    −   a link weighting process for determining the individual link strength of each

of said plurality of links, thus generating a plurality of link strengths [Figure 12,

item 1202]; and

    −   a link strength summing process for determining the sum of said plurality

of link strengths, wherein said sum corresponds to the popularity of said text-

based object [Figure 12, item 1203]" as claimed.

Applicant Argues

Herz does not disclose a query analysis process for analyzing a query to

determine a plurality of links to Internet objects and a link strength summing process for

determining the sum of said plurality of link strengths. In particular,

> In step 1201 Herz teaches "certain designated numeric attributes of target object X are
> specifically selected" (column 18, lines 37-39), which is different than the Examiner's
> interpretation of "determine of plurality of links to Internet objects". In fact Herz operates on
> attributes of the same target object not on a plurality of links to Internet objects as required by
> claims ... (Page 1 of Applicants' remarks submitted on 6/23/05)

Applicant's claimed invention sums strengths related to links to different objects, while

Herz disclosed summing weighted values of attributes related to the same target object.

Examiners Response

Examiner respectfully disagrees with Applicants' arguments presented. Applicant

alleges that Figure 12 does not disclose the invention as claimed. Figure 12 discloses a

useful flowchart in understanding Herz's invention. This Figure was used primarily to

show the correlation to the invention as claimed, Applicants' arguments solely

distinguishing the invention as claimed from the cited Figure are found to be unpersuasive.

Herz discloses that Figure 12 illustrates in flow diagram form the process for determination of likelihood of interest by a specific user in a selected target object (brief description of Figure 12). This process determines the links to an Internet object. As Applicant admits Herz discloses the "customized electronic identification of desirable objects" (Herz: Abstract), thus the process is meant to be repeated disclosing the plurality of links to Internet objects.

Applicants' argument that Herz does not sum the strengths related to links to different objects is irrelevant and unpersuasive. The plain text of the claim recites "a link strength summing process for determining the sum of said plurality of link strengths, wherein **said sum corresponds to the popularity of said text-based object**." (Claim 1 (emphasis added)). Applicant admits this is disclosed by citing column 18, lines 65-67 in page 2 of the remarks.

Regarding claim 2, Herz teaches the popularity predicting process of claim 1 "wherein said link weighting process includes a click analysis process for determining a link use statistic [Especially in systems where users can choose whether or not to retrieve a target object, a target object's popularity (or circulation) can be usefully measured as a numeric attribute specifying the number of users who have retrieved that object. (Column 12, lines 12-16)] for each of said plurality of links, wherein the link use statistic of each said link affects the strength of that link" as claimed.

Regarding claim 3, Herz teaches the popularity predicting process of claim 2 "wherein said link use statistic is an integer specifying the number of times that that link was used prior to said query analysis process analyzing said query [Especially in systems where users can choose whether or not to retrieve a target object, a target object's popularity (or circulation) can be usefully measured as a numeric attribute specifying the number of users who have retrieved that object. (Column 12, lines 12-16)]" as claimed.

Regarding claim 4, Herz teaches the popularity predicting process of claim 1 "wherein said link weighting process includes a content analysis process for analyzing the relevancy between each of said plurality of Internet objects and said query [Relevance Feedback (Column 17, line 15 – Column 18, line14)], wherein the relevancy value of each said Internet object affects the strength of the link to that Internet object" as claimed.

Regarding claim 5, Herz teaches the popularity predicting process of claim 1 "wherein said link weighting process includes a link structure analysis process for analyzing the quality [A target object may also receive explicit numeric evaluations (another kind of numeric attribute) from various groups, such as the Motion Picture Association of America (MPAA), as above, which rates movies' appropriateness for children, or the American Medical Association, which might rate the accuracy and

novelty of medical research papers (Column 12, lines 24-30)] of each of said plurality of Internet objects, wherein the quality value of each said Internet object affects the strength of the link to that Internet object" as claimed.

Regarding claim 6, Herz teaches the popularity predicting process of claim 5 "wherein said link structure analysis process includes an incoming link analysis process for determining the number of objects linked to each of said plurality of Internet objects, wherein the incoming link value of each said Internet object is directly proportional to the number of objects linked to that Internet object [Important associative attributes for a hypertext document are the list of documents that it links to, and the list of documents that link to it (Column 12, lines 5-7)], wherein said incoming link value affects said quality value of that Internet object" as claimed.

Regarding claim 7, Herz teaches the popularity predicting process of claim 5 "wherein said link structure analysis process includes an outgoing link analysis process for determining the number of objects that each of said plurality of Internet objects is linked to, wherein the outgoing link value of each said Internet object is directly proportional to the number of objects that said Internet object is linked to [Important associative attributes for a hypertext document are the list of documents that it links to, and the list of documents that link to it (Column 12, lines 5-7)], wherein said outgoing link value affects said quality value of that Internet object" as claimed.

Regarding claim 8, Herz teaches the popularity predicting process of claim 1 "wherein each said link strength is a relevancy score [Figure 12, item 1202]" as claimed.

Regarding claim 10, Herz teaches the popularity predicting process of claim 1 "wherein said query is a text-based query and includes at least a portion of the text of said text-based object [a profile consisting of a collection of attributes, such that a user likes target objects whose profiles are similar to this collection of attributes, is termed a "search profile" or in some contexts a "query" or "query profile," (g.) a specific embodiment of the target profile interest summary which comprises a set of search profiles is termed the "search profile set" of a user, (Column 4, line 49 – Column 5, line 6)]" as claimed.

Regarding claim 11, Herz teaches the popularity predicting process of claim 10 "wherein said text-based object is a query [a profile consisting of a collection of attributes, such that a user likes target objects whose profiles are similar to this collection of attributes, is termed a "search profile" or in some contexts a "query" or "query profile," (g.) a specific embodiment of the target profile interest summary which comprises a set of search profiles is termed the "search profile set" of a user, (Column 4, line 49 – Column 5, line 6)]" as claimed.

Regarding claim 12, Herz teaches the popularity predicting process of claim 10 "wherein said text-based object is a document [a profile consisting of a collection of

attributes, such that a user likes target objects whose profiles are similar to this collection of attributes, is termed a "search profile" or in some contexts a "query" or "query profile," (g.) a specific embodiment of the target profile interest summary which comprises a set of search profiles is termed the "search profile set" of a user, (Column 4, line 49 – Column 5, line 6)]" as claimed.

Regarding claim 13, Herz teaches the popularity predicting process of claim 1 "wherein said plurality of links is a user-definable number of links and said popularity predicting process further comprises a link limitation process for defining said user-definable number of links [To prevent users from being flooded with responses, it may be desirable to limit the number of notifications each user receives to a fixed number (Column 16 line 65 – Column 17 line 14)]" as claimed.

Regarding claim 14, Herz teaches the popularity predicting process of claim 1 "further comprising an object conversion process for converting said text-based object into said query [Figure 5, Column 4, line 49 – Column 5, line 6]" as claimed.

Claims 15-20 are rejected due to their duplication of claims 2, 3, 5, 6, 7, 4 (respectively).

Claims 21-28 refer to the method for the system of claims 1, 2, 4, 5, 6, 7, 10, 13 (respectively), thus are rejected for the same reasons as claims 1, 2, 4, 5, 6, 7, 10, 13.

Claim 29 refers to the apparatus of process claim 1, thus is rejected for the same reasons as claim 1.

Claim 33 refers to a processor and memory configured to perform the method of claim 1, thus is rejected for the same reasons as claim 1.

Regarding claim 37 Herz teaches a popularity predicting process for determining the popularity of a text-based object. See Figures 2, 5, 11, 12, 16 and the corresponding portions of Herz's disclosure for this teaching. In particular, Herz teaches "A popularity predicting process for determining the popularity of a text-based object, comprising:

 - an object conversion process for converting said text-based object into a query [Figure 5, Column 4, line 49 – Column 5, line 6];

 - a query analysis [Column 4, line 49 – Column 5, line 6] process [Figure 12, item 1201] for analyzing a query to determine a plurality of links to Internet objects [target data objects] relating to said query;

 - a link weighting process for determining the individual link strength of each of said plurality of links, thus generating a plurality of link strengths [Figure 12, item 1202]; and

 - a link strength summing process for determining the sum of said plurality of link strengths, wherein said sum corresponds to the popularity of said text-based object [Figure 12, item 1203]" as claimed.

Regarding claim 38 Herz teaches a popularity predicting process for determining

the popularity of a text-based object. See Figures 2, 5, 11, 12, 16 and the corresponding

portions of Herz's disclosure for this teaching. In particular, Herz teaches "A popularity

predicting process for determining the popularity of a text-based object, comprising:

      – an object conversion process for converting said text-based object into a

query [Figure 5, Column 4, line 49 – Column 5, line 6];

      – a query analysis [Column 4, line 49 – Column 5, line 6] process [Figure

12, item 1201] for analyzing a query to determine a plurality of links to Internet

objects [target data objects] relating to said query;

      – a link weighting process for determining the individual link strength of each

of said plurality of links, thus generating a plurality of link strengths [Figure 12,

item 1202]" as claimed.

Regarding claim 39, Herz teaches the popularity predicting process of claim 38

"further comprising a link strength summing process for determining the sum of said

plurality of link strengths, wherein said sum corresponds to the popularity of said text-

based object [Figure 12, item 1203]" as claimed.

Regarding claim 40, Herz teaches a popularity predicting process for determining

the popularity of a text-based object. See Figures 2, 5, 11, 12, 16 and the corresponding

portions of Herz's disclosure for this teaching. In particular, Herz teaches "A·popularity predicting process for determining the popularity of a text-based object, comprising:

- a search engine [Column 4, line 49 – Column 5, line 6] process [Figure 12, item 1201] for analyzing a query to determine a plurality of links to Internet objects [target data objects] relating to said query and for determining the individual link strength of each of said plurality of links [Figure 12, item 1202], thus generating a plurality of link strengths; and

- a link strength summing process for determining the sum of said plurality of link strengths, wherein said sum corresponds to the popularity of said text-based object [Figure 12, item 1203]" as claimed.

Regarding claim 41, Herz teaches the popularity predicting process of claim 40 "wherein said search engine comprises:

- a query analysis process [Column 4, line 49 – Column 5, line 6] process [Figure 12, item 1201] for determining said plurality of links to Internet objects relating to said query; and

- a link weighting process [Figure 12, item 1202] for determining said plurality of link strengths" as claimed.

Regarding claim 42, Herz teaches a popularity predicting process for determining the popularity of a text-based object. See Figures 2, 5, 11, 12, 16 and the corresponding

portions of Herz's disclosure for this teaching. In particular, Herz teaches "A popularity

predicting process for determining the popularity of a text-based object, comprising:

    – an object conversion process for converting said text-based object into a

query [Figure 5, Column 4, line 49 – Column 5, line 6];

    – a search engine [Column 4, line 49 – Column 5, line 6] process [Figure 12,

item 1201] for analyzing a query to determine a plurality of links to Internet

objects [target data objects] relating to said query and for determining the

individual link strength of each of said plurality of links [Figure 12, item 1202],

thus generating a plurality of link strengths; and

    – a link strength summing process for determining the sum of said plurality

of link strengths, wherein said sum corresponds to the popularity of said text-

based object [Figure 12, item 1203]" as claimed.

Regarding claim 43, Herz teaches the popularity predicting process of claim 42

"wherein said search engine comprises:

    – a query analysis process [Column 4, line 49 – Column 5, line 6] process

[Figure 12, item 1201] for determining said plurality of links to Internet objects

relating to said query; and

    – a link weighting process [Figure 12, item 1202] for determining said

plurality of link strengths" as claimed.

Regarding claim 44, Herz teaches a popularity predicting process for determining the popularity of a text-based object. See Figures 2, 5, 11, 12, 16 and the corresponding portions of Herz's disclosure for this teaching. In particular, Herz teaches "A popularity predicting process for determining the popularity of a text-based object, comprising:

 – an object conversion process for converting said text-based object into a query [Figure 5, Column 4, line 49 – Column 5, line 6];

 – a search engine [Column 4, line 49 – Column 5, line 6] process [Figure 12, item 1201] for analyzing a query to determine a plurality of links to Internet objects [target data objects] relating to said query and for determining the individual link strength of each of said plurality of links [Figure 12, item 1202], thus generating a plurality of link strengths" as claimed.

Regarding claim 45, Herz teaches the popularity predicting process of claim 44 "wherein said search engine comprises:

 – a query analysis process [Column 4, line 49 – Column 5, line 6] process [Figure 12, item 1201] for determining said plurality of links to Internet objects relating to said query; and

 – a link weighting process [Figure 12, item 1202] for determining said plurality of link strengths" as claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

9.   Claim 9, 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over

U.S. Patent No. 5,835,087 to Herz et al., hereafter "Herz".

Regarding claim 9, Herz teaches the popularity predicting process of claim 8

where there is a relevancy score as discussed above.

Herz does not teach that the relevancy score is a percentage.

The Examiner takes official notice that expressing a score as a percentage was

well known in the art at the time of applicant's invention.

It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to express the relevancy score as taught by Herz as a percentage.

The motivation to do so would have been to be able to represent the relevancy score in a normalized fashion.

Applicant Argues

Claim 9 ... are distinguished over Herz as argued for claim 1...

Examiners Response

Examiner has traversed Applicants' arguments regarding claim 1 ... *supra*.

Regarding claims 30 - 32, cancelled

Regarding claims 34 – 36, Herz teaches a processor and memory of claim 33, and that Herz's system can be preformed by a computer.

Herz does not expressly teach that said processor and memory are (Claim 34) incorporated into a personal computer, (Claim 35) incorporated into a network server, or (Claim 36) incorporated into a single board computer.

The Examiner takes official notice that a personal computer, network server, or a single board computer were well known design options at the time of Applicant's invention.

At the time of the invention It would have been obvious to a person having ordinary skill in the art to implement the system of Herz on a personal computer, network server, or a single board computer.

The motivation to do so would have been to allow flexibility in the implementation to allow cost efficiency.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Luke Osborne whose telephone number is (571) 272-

4027. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LRO

Paul L. Rodriguez   9/8/05

Primary Examiner
Art Unit 2125